

In the Claims:

Please amend the claims as follows:

Please substitute pending claim 1 with the following claim having the same number, and claim 1 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

1. A wireless communication system, comprising:
- transmitter circuitry comprising encoder circuitry for receiving a plurality of symbols;
- a plurality of antennas coupled to the transmitter circuitry and for transmitting
- 5 signals from the transmitter circuitry to a receiver, wherein the signals are responsive to the plurality of symbols; and
- wherein the encoder circuitry is for applying space time block coded transmit antenna open loop diversity and closed loop diversity to the plurality of symbols to form the signals;
- 10 wherein the plurality of antennas comprises a plurality of sets of antennas;
- wherein for each of the sets of antennas the encoder circuitry is for applying space time block coded transmit antenna diversity to selected ones of the plurality of symbols such that signals transmitted by any one antenna in the set of antennas represent open loop diversity with respect to signals transmitted by any other antenna in the set of
- 15 antennas; and
- wherein for each of the sets of antennas the encoder circuitry is for applying a weight to the plurality of symbols such that signals transmitted in response to the weight represent a closed loop diversity with respect to signals transmitted by any other antenna in any other of the sets of antennas.

Please cancel claims 2 and 3 without disclaimer or prejudice.

Please substitute pending claim 4 with the following claim having the same number, and claim 4 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

- 2 4. The system of claim 1:  
wherein the plurality of sets of antennas consists of two sets of antennas; and  
wherein each of the sets of antennas consists of two antennas.

Please substitute pending claim 5 with the following claim having the same number, and claim 5 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

- 3 5. The system of claim 1:  
wherein the plurality of sets of antennas consists of three sets of antennas; and  
wherein each of the sets of antennas consists of two antennas.

Please substitute pending claim 6 with the following claim having the same number, and claim 6 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

- 4 6. The system of claim 1:  
wherein the plurality of sets of antennas consists of two sets of antennas; and  
wherein each of the sets of antennas consists of four antennas.

Please substitute pending claim 7 with the following claim having the same number, and claim 7 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

5  
7. The system of claim 1:

wherein the plurality of sets of antennas consists of four sets of antennas; and  
wherein each of the sets of antennas consists of two antennas.

Please cancel claims 8, 9, 10, and 12 without disclaimer or prejudice.

Please substitute pending claim 28 with the following claim having the same number, and claim 28 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

28  
28. A wireless communication receiver for receiving signals from transmitter circuitry transmitting along a plurality of sets of transmit antennas, wherein the signals are formed by the transmitter circuitry by applying space time block coded transmit antenna diversity to selected ones of the plurality of symbols such that signals transmitted by any one antenna in the set of antennas represent space time block coded open loop diversity with respect to signals transmitted by any other antenna in the set of antennas and wherein for each of the sets of antennas the encoder circuitry is for applying a weight to the plurality of symbols such that signals transmitted in response to the weight represent a closed loop diversity with respect to signals transmitted by any other antenna in any other of the sets of antennas, the receiver comprising:

a despreader having an output and for producing a despread symbol stream at the output in response to the signals; and

27  
15 decoder circuitry coupled to the output of the despreader and for decoding space time block coded open loop diversity and closed loop diversity with respect to the despread symbol stream.

Please substitute pending claim 31 with the following claim having the same number, and claim 31 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

25 31. The receiver of claim <sup>22</sup>~~25~~ and further comprising:  
a channel estimator coupled to the output of the despreader and for determining estimated channel impulse responses based on the despread symbol stream; and  
wherein the decoder circuitry is for decoding space time block coded open loop  
5 diversity and closed loop diversity with respect to the despread symbol stream and in response to the estimated channel impulse responses.

Please substitute pending claim 34 with the following claim having the same number, and claim 34 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

28  
34. A method of operating a wireless communication system, comprising the steps of:  
receiving a plurality of symbols into encoder circuitry;  
applying space time block coded open loop diversity and closed loop diversity to  
5 the plurality of symbols to form a plurality of signals; and  
transmitting the plurality of signals along a plurality of antennas to a receiver;  
wherein the plurality of antennas comprises a plurality of sets of antennas; and  
wherein the step of applying space time block coded open loop diversity and closed loop diversity applies space time block coded open loop diversity to selected

- 10 ones of the plurality of symbols such that signals transmitted by any one antenna in the set of antennas represent open loop diversity with respect to signals transmitted by any other antenna in the set of antennas.

Please cancel claim 35 without disclaimer or prejudice.

Please substitute pending claim 36 with the following claim having the same number, and claim 36 is also shown in re-written form, with underlining showing additions, on a sheet attached to this Amendment and filed herewith:

29  
36. The method of claim <sup>28</sup>34 wherein for each of the sets of antennas the step of applying open loop diversity and closed loop diversity applies a weight to the plurality of symbols such that signals transmitted in response to the weight represent a closed loop diversity with respect to signals transmitted by any other antenna in any other of the sets of antennas.